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**Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997**

**INSTRUCTIONS**

**1. General** – The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in item 18B. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies which are not listed, describe and report them in the "Cost of all other materials . . ." line at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . .," Census material code 970099 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

**2. Valuation of Materials Consumed** – The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amounts actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

**3. Produced and Consumed** – Forgings, foundries, and screw machine products – Report the quantities produced and used in manufacturing other products made in this establishment in item 19. Note that the materials used to produce these items should be reported in item 17.

**4. Contract Work** – Include as materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in item 10, line e, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract, from commission should be excluded.

**5. Resales, including Machine Tools, assemblies and Knockdowns** – Cost for product bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in item 10, line b, not in item 17 below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 99989 00 6, "Resales."

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Line No.	Materials, parts, and supplies  <b>(A)</b>		Census material code  <b>(B)</b>	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in) <b>(E)</b>		
				574 Millions	Thou- sands	Dollars
<b>1</b>	FLUID POWER PRODUCTS (Hydraulic and pneumatic)	Pumps, motors, and hydrostatic transmissions	359412 4	\$		
<b>2</b>		Cylinders and rotary actuators	359301 9			
<b>3</b>		Filters	356921 7			
<b>4</b>		Hose or tube fittings and assemblies	349261 8			
<b>5</b>		Valves	349271 7			
<b>6</b>	FABRICATED METAL PRODUCTS (Except forgings)	Bolts, nuts, screws, washers, and screw machine products	345001 2			
<b>7</b>		Other fabricated metal products, except fluid power products	340078 5			
<b>8</b>	Forgings		346000 3			
<b>9</b>	CASTINGS (Rough and semifinished)	Iron and steel	332001 7			
<b>10</b>		Nonferrous castings	336010 4			
<b>11</b>	Shapes and Forms (Except castings, forgings, and fabricated metal products)	STEEL	Bars, bar shapes, and plates	331007 5		
<b>12</b>			Sheet and strip	331022 4		
<b>13</b>			Structural shapes	331071 1		
<b>14</b>			All other	331091 9		

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Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued								
Line No.	Materials, parts, and supplies  (A)			Census material code  (B)	Consumption of purchased materials and of materials received from other establishments of your company			
					Cost, including delivery cost (freight-in) (E)			
				571	574	Millions	Thousands	Dollars
15	Nonferrous shapes and forms			336002 1	\$			
16	Electric Motors and Generators	FRACTIONAL HORSEPOWER ELECTRIC MOTORS (Less than 1 horsepower)	Timing motors, synchronous and subsynchronous	362110 9				
17			Other fractional horsepower electric motors (less than 1 horsepower) (excluding timing motors)	362115 8				
18		Integral horsepower motors and generators (1 horsepower and larger)	362120 8					
19	Electric transmission, distribution, and control equipment			360101 0				
20	Electrical industrial capacitors, resistors, rheostats, and coil windings			362001 0				
21	Numerical controls for metalworking machinery (except programmable)			362520 9				
22	Programmable controllers for metalworking machinery			362521 7				
23	BEARINGS (Including both mounted and unmounted bearings)	Ball		356218 8				
24		Roller		356201 4				
25	Speed changers, gears, and industrial high-speed drives			356601 5				
26	Wood boxes, pallets, skids, and containers			244021 2				
27	Cutting tools for machine tools			354501 9				
28	Cost of all other materials and components, parts, containers, and supplies consumed . . . . . <i>Describe the three principal materials, etc. included in this value. (See instruction number 5 regarding machine tool subassemblies and knockdowns)</i>			970099 8				
29	<b>TOTAL</b> Sum of lines 1–28 should equal item 10, line a				\$			

**Item 18A. INSTRUCTIONS AND INQUIRY FOR COMPANIES ENGAGED IN INSTALLATION (OR ERECTION) OF PRODUCTS OF THEIR OWN MANUFACTURE**

It is preferable that you report the value of shipments for individual products excluding the amounts received for installation and erection. The installation and erection receipts (if any) should be reported on line 152 in item 18B. In order to evaluate the reporting for this item, please answer the following questions:

	Key		Mark (X) in appropriate boxes		
	591	5512			
<b>1a. Do the value of shipments figures for individual products include the cost of installation or erection of the product?</b> . . . . .			1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No	3 <input type="checkbox"/> Don't know
<b>b. If "Yes," please estimate the total amount received for installation or erection.</b> . . . . .			1 <input type="checkbox"/> Under \$50,000	2 <input type="checkbox"/> \$50,000–\$499,999	3 <input type="checkbox"/> \$500,000–\$999,999 4 <input type="checkbox"/> \$1 million or more
<b>2. Do the employees of this manufacturing establishment install or erect the products of your company?</b> . . . . . If "Yes," include these employees in item 2 and their wages in item 3.			1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No	3 <input type="checkbox"/> Don't know
<b>3. Does a distinct outside labor force (not attached to this manufacturing plant) erect or install the products for your establishment?</b> . . . . . If "Yes," do not include this labor force in item 2 or their wages in item 3. Payments made by this establishment for any work done by others should be reported as a cost of contract work in item 10. The payroll of this outside labor force should be reported by the establishment that maintains the records for them.			1 <input type="checkbox"/> Yes	2 <input type="checkbox"/> No	3 <input type="checkbox"/> Don't know

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**Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997**

**INSTRUCTIONS**

**1. General** – The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of item 18B. PLEASE DO NOT COMBINE PRODUCT LINES.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

**2. Valuation of Products** – Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

**3. Contract Work** – Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific lines as if they were made in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" under Census product code 93000 00 8.

**4. Resales** – Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census product code 99989 00 6, "Resales."

**5. Machine Tool Subassemblies and Knockdowns** – Report the sale of purchased machine tool subassemblies and knockdowns under Census product code 99989 00 6, "Resales," (line 156).

**6. Detailed Data Reported Elsewhere** – Items denoted by an asterisk (\*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the CIR forms, the sum of the detailed CIR products should equal the total reported on this census form. For survey item codes, see paragraph 4, "comparability," of CIR Instruction Manual.

**NOTE:** Only CIR totals are requested; do not duplicate detail reported on the CIR.

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports  (A)	Census product code  581 (B)	Products shipped and other receipts			
			Quantity (Number)  583 (D)	Value, f.o.b. plant (E)		
				584 Millions	Thou-sands	Dollars
1	Boring machines (excluding machining centers) and drilling machines (excluding machining centers) (corresponds to the sum of item codes 1110–1265 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (3541D)*	3541D 00 2		\$		
2	Gear-cutting machines (corresponds to item code 1991 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35413)*	35413 00 4				
3	Grinding and polishing; buffing, honing, and lapping machines (except gear-tooth grinding, lapping, polishing, and buffing machines) (corresponds to the sum of item codes 2010–2740 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35414)*	35414 00 2				
4	Lathes (turning machines, numerically and non-numerically controlled) (corresponds to the sum of item codes 2801–2811 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35415)*	35415 00 9				
5	Milling machines (excluding machining centers) (corresponds to the sum of item codes 3309–3675 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35416)*	35416 00 7				
6	Machining centers (multifunction numerically controlled machines) (corresponds to the sum of item codes 3721–3736 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (3541A)*	3541A 00 8				
7	Station-type machines (corresponds to the sum of item codes 3821–3825 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (3541B)*	3541B 00 6				
8	Other metal cutting machine tools, n.e.c. (except station-type and machining centers and those designed primarily for home workshops, laboratories, etc.), including broaching machines, sawing and cut-off machines, spark erosion, ultrasonic, and electrolytic machines, rifling, centering, key seating, pointing, chamfering, facing, shaving, grooving, counter-sinking, burring, reaming, screw and nut slotting machines, threading, planers, and shapers (corresponds to the sum of item codes 3840–4630 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (3541C)*	3541C 00 4				
9	MACHINE TOOLS DESIGNED PRIMARILY FOR HOME WORKSHOPS, LABORATORIES, GARAGES, ETC. (Metalworking and primarily metalworking only) (35418)					
10	Drilling machines	35418 11 0				
11	Grinding and polishing machines (including crankshaft regrinding and valve grinding machines)	35418 31 8				
12	Lathes	35418 51 6				
13	Sawing and cut-off machines	35418 71 4				
	Other metalworking (or primarily metalworking) types (including automotive cylinder reboring machines) – Specify kind	35418 91 2				

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 - Continued							
Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports  (A)		Census product code  581 (B)	Products shipped and other receipts			
				Quantity (Number)  583 (D)	Value, f.o.b. plant (E)		
					584 Millions	Thou- sands	Dollars
14	PARTS FOR METAL CUTTING TYPE MACHINE TOOLS, SOLD SEPARATELY, AND REBUILT METAL CUTTING TYPE MACHINE TOOLS (35419)	Parts for metal cutting machine tools (sold separately) (Parts for metal forming tools should be reported under product code 35424 09, line 19)	35419 11 8		\$		
15		Rebuilt metal cutting type machine tools (Report rebuilt metal forming type machine tools under code 35424 75, line 21)	35419 41 5				
16		Punching and shearing machines (including power and manual) and bending and forming machines (power only) (corresponds to the sum of item codes 5009-5270 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35421)*	35421 00 7				
17		Metalworking presses (except forging and die-stamping presses) (corresponds to the sum of item codes 5409-6305 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35422)*	35422 00 5				
18		Other metal forming machine tools, including forging and die-stamping machines, thread-rolling machinery, metal container-making machinery, die-casting machines, riveting machines (except handheld portable types), and all other metal forming type machine tools, not elsewhere classified (corresponds to the sum of item codes 6405-7173 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) (35423)*	35423 00 3				
19	PARTS FOR METAL FORMING MACHINE TOOLS, SOLD SEPARATELY, AND REBUILT METAL FORMING MACHINE TOOLS (35424)	Parts for die-casting machines	35424 09 2				
20		Other parts for metal forming machine tools	35424 10 0				
21		Rebuilt metal forming machine tools	35424 75 3				
22	HOT ROLLING MILL MACHINERY (Including combination hot and cold) (Except tube rolling) (35471)	Blooming, slabbing, plate rolling (except tin plate), and hot strip mill machinery	35471 15 0				
23		Other hot rolling mill machinery and equipment - <i>Specify kind</i>	35471 18 4				
24	COLD ROLLING MILL MACHINERY (35472)	Tandem roll mills	35472 21 6				
25		Single stand roll mills	35472 23 2				
26		Other cold rolling mill machinery and equipment - <i>Specify kind</i>	35472 26 5				
27	OTHER ROLLING MILL MACHINERY (Including tube mill machinery) AND PARTS FOR ALL ROLLING MILL MACHINERY (35473)	Tube mill machinery	35473 35 4				
28		Processing lines (including pickling and cleaning, tinning, galvanizing, etc.), scarfing units, and press feed lines	35473 45 3				
29		Other rolling mill machinery and equipment (except parts) - <i>Specify kind</i>	35473 49 5				
30		Machined rolls for rolling mills	35473 51 1				
31		Parts (except rolls) for rolling mill machinery, sold separately	35473 52 9				

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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services  (A)		Census product code  581 (B)	Products shipped and other receipts				
				Quantity (Number) 583 (D)	Value, f.o.b. plant (E)			
					584 Millions	Thou- sands	Dollars	
32	ASSEMBLY MACHINES (35492)	Rotary transfer (dial or rotary, trunnion, center column)	35492 11 5		\$			
33		In-line transfer, synchronous	35492 15 6					
34		In-line transfer, nonsynchronous	35492 17 2					
35		Special-purpose and other types – <i>Specify kind</i>						
			35492 13 1					
36		Parts and attachments for assembly machines (sold separately)	35492 18 0					
37		Industrial robots, attachments, and parts	35699 09 9					
38	Other Metalworking Machinery (Except handheld and ultrasonic) (35495)	MACHINES FOR WEAVING AND OTHER WIRE FABRICATING AND WIREDRAWING MACHINES AND DRAW BENCHES	Draw benches and wiredrawing machines (except dies)	35495 01 9				
39			Wire rope or wire cable making machines	35495 02 7				
40			Other machines for working wire – <i>Specify kind</i>					
				35495 03 5				
41			COIL HANDLING EQUIPMENT (CONVERSION OR STRAIGHTENING)	Cut-to-length lines	35495 43 1			
42				Slitting lines	35495 45 6			
43			Other metalworking machinery – <i>Specify kind</i>					
				35495 92 8				
44		Parts and attachments for other metalworking machinery (sold separately)	35495 95 1					
45		Metal-treating compounds (nonoil base) for nitriding, pickling, drawing, and cutting	28995 59 5					
46	Nonmetallic Abrasive Products (Including diamond abrasives) (32916)	ARTIFICIAL AND NATURAL BONDED ABRASIVES (Including grinding wheels, sticks, stones, hones, balls, and bricks; excluding refractory bricks, floor and stair brick)	Vitrified bond	32916 31 4				
47			Resinoid and shellac bond – reinforced	32916 37 1				
48			Resinoid and shellac bond – nonreinforced	32916 42 1				
49			Rubber bond	32916 44 7				
50			Diamond wheels	Metal bond	32916 72 8			
				Other bond	32916 74 4			
51								
52				Cubic boron nitride wheels, all bonds	32916 76 9			
53	(Continued on next page)	Other bonded abrasives – <i>Specify kind</i>						
			32916 65 2					

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**Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued**

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports		Census product code 581	Unit of measure for quantities (C)	Products shipped and other receipts					
					Quantity 583 (D)	Value, f.o.b. plant (E)				
						584 Millions	Thou- sands	Dollars		
<b>54</b>	<b>Non-metallic Abrasive Products</b> (Including diamond abrasives) <b>(32916) – Continued</b>	Other artificial and natural nonmetallic abrasive products (except coated abrasives; including grinding, lapping, buffing compounds, crude lump forms, etc.) – <i>Specify kind</i>	32916 98 3							
<b>55</b>	ROLLS (NOT MACHINED) FOR ROLLING MILLS	Gray iron (except ductile)	33219 31 2	Short tons						
<b>56</b>		Carbon steel (excluding investment)	33252 15 6							
<b>57</b>		Other alloy steel (except carbon and high alloy, excluding investment)	33255 55 5	Short tons						
<b>58</b>		Gray iron castings, except ductile iron (except pressure pipe, soil pipe, rolls for rolling mills, automotive, construction, and utility)	33219 98 1	Short tons						
<b>59</b>	INDUSTRIAL PATTERNS (WOOD, METAL, ETC.), (Except shoe patterns)	Foundry patterns	35430 11 5							
<b>60</b>		All other industrial patterns (except shoe patterns)	35430 98 2							
<b>61</b>	<b>Special Dies and Tools, Die Sets, Jigs, and Fixtures (35441)</b>	JIGS AND FIXTURES, ALL TYPES	Gauging and checking types	Less than 1,000 pounds weight	35441 13 8					
<b>62</b>				1,000 pounds weight or more	35441 15 3					
<b>63</b>		All other jigs and fixtures (holding, positioning, layout, assembly, etc.)	Work holding fixtures (corresponds to item code 8004 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997)*	Less than 1,000 pounds weight	35441 16 1					
<b>64</b>				Other than work holding fixtures	35441 14 6					
<b>65</b>				1,000 pounds weight or more	35441 18 7					
<b>66</b>			Standard catalog components and parts for jigs and fixtures (including drill bushings)	35441 19 5						
<b>67</b>		DIES, METAL-WORKING ONLY	Press brake dies		35441 21 1					
<b>68</b>				Forming and drawing dies	500 pounds weight or less	35441 22 9				
<b>69</b>					501 to 3,000 pounds weight	35441 24 5				
<b>70</b>					More than 3,000 pounds weight	35441 26 0				
<b>71</b>				Stamping dies (including lamination and blanking dies)	Progressive-type dies:	• High-speed steel	35441 27 8			
<b>72</b>						• Carbide	35441 28 6			
<b>73</b>						• Other	35441 25 2			
<b>74</b>	(Continued on next page)	(Continued on next page)	All other stamping-type dies (punch, trim, notch, pierce, perforate, etc.)	35441 23 7						

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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports			Census product code 581	Unit of measure for quantities (C)	Products shipped and other receipts					
						Quantity 583	Value, f.o.b. plant (E)				
							584 Millions	Thou-sands	Dollars		
(A)	(B)	(D)									
75	Special Dies and Tools, Die Sets, Jigs, and Fixtures (35441) – Continued	DIES, METAL-WORKING ONLY – Continued	Forging dies (Including cold forging and heading)	Open-die type	35441 33 6						
76				Closed-die type	35441 35 1						
77		Extrusion and wire-drawing and straight-ening dies		High-speed steel	35441 43 5						
78				Carbide	35441 45 0						
79				Ceramic and ceramic composite	35441 42 7						
80				Other	35441 44 3						
81		All other dies		High-speed steel	35441 46 8						
82				Carbide	35441 47 6						
83				Other	35441 48 4						
84		Standard and special components and parts for dies		Die sets	35441 73 2						
85				Standard punches:	• Steel	35441 75 7					
86					• Carbide	35441 77 3					
87				Other	35441 78 1						
88		Industrial models and prototypes			35441 83 1						
89		Other specially designed tooling			35441 89 8						
90		SMALL CUTTING TOOLS FOR MACHINE TOOLS AND METAL WORKING MACHINERY	Broaches (excluding holders and burnishing bars)		35451 14 5						
91			Gear shaper cutters and gear shaving cutters		35451 47 5						
92			High-speed steel milling cutters, n.e.c. (except end mills and inserted blade cutters)		35451 62 4						
93			Chasers, single edge thread-cutting, circular blade and tangent types for mounting into or onto holders, die heads, and tap bodies (excluding all die heads, tap bodies, and chaser holders)		35451 75 6						
94	Other small cutting tools for machine tools and metalworking machinery – Specify kind			35451 00 4							
95	WORK HOLDING DEVICES	Rotary tables, including numerically controlled		35454 46 1							
96		Indexing work holders, excluding rotary tables (corresponds to item code 8006 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997)*		35454 47 9							
97		Collets, jaws, vises (corresponds to the sum of item codes 8002, 8003, 8005 as reported on CIR Form MQ35W, Metalworking Machinery, for 1997) *		35454 57 8							
98		Other than collets, jaws or vises such as mandrels, feeding fingers clamps, stops, etc.		35454 58 6							

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**Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued**

Line No.	Products and services  <b>(A)</b>			Census product code  <b>(B)</b>	Unit of measure for quantities  <b>(C)</b>	Products shipped and other receipts		
						Quantity  <b>(D)</b>	Value, f.o.b. plant <b>(E)</b>	
							584 Millions	Thou- sands
99	<b>Arc Welding Machines, Components, and Accessories, (Except Electrodes; excluding stud welding equipment) (35481)</b>	ARC-WELDING MACHINES	Alternating current transformer arc welders	35481 14 2				
100			Direct current arc welders	Rectifier-type direct current arc welder except stud welders, fully or partly automatic	35481 02 7			
101				Rectifier-type direct current arc welder except stud welders, fully or partly automatic	35481 01 9			
102			Generators only	35481 03 5				
103			Complete units only	35481 15 9				
104		Transformers for arc welders	35481 05 0					
105		COM-PONENTS AND ACCES-SORIES FOR ARC WELDING MACHINES (Except electrode)	Automatic and semiautomatic wire drive apparatus and related accessories	35481 07 6				
106			Automatic and semiautomatic welding torches, guns and cables, and related accessories	35481 09 2				
107			Special-purpose automatic welding apparatus	35481 08 4				
108			Circuit welding accessories (including electrode holders, ground clamps, cable connectors, cables sold separately, etc.)	35481 11 8				
109	Positioning and manipulating equipment (including turn rolls, head and tail stock, weld head manipulators, seamers, moving carriages, etc.)		35481 12 6					
110	All other components and accessories for arc welding machinery (excluding welding rods and electrodes)		35481 18 3					
111	<b>Arc Welding Electrodes, Metal (35482)</b>	STICK ELEC-TRODES (Including solid, cored, covered, and bare electrodes)	Hard facing	35482 09 0	Thousand pounds			
112			Other Than Hard Facing	Mild steel		35482 03 3		
113				Low alloy steel		35482 04 1		
114				Stainless steel (chromium 4 percent or more)		35482 05 8		
115				Nonferrous		35482 06 6		
116		COILED AND SPOOLED CONTINUOUS WIRE ELEC-TRODES FOR AUTO-MATIC ARC WELDING AND INERT GAS SHIELDED ARC WELDING (Including electrodes for submerged arc welding, bare wire)	Hard facing	35482 17 3				
117			Other Than Hard Facing	• Mild steel		35482 11 6		
118				• Low alloy steel		35482 12 4		
119				• Stainless steel (chromium 4 percent or more)		35482 13 2		
120				• Nonferrous		35482 14 0		
121	Cored wire			35482 18 1				

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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services  (A)		Census product code  (B)	Unit of measure for quantities  (C)	Products shipped and other receipts			
					Quantity  (D)	Value, f.o.b. plant (E)		
						584 Millions	Thou- sands	Dollars
122	RESISTANCE WELDERS, COMPONENTS, SERIES, AND ELECTRODES (35483)	Spot and projection welders – single electrode	35483 05 6	Number		\$		
123		Spot and projection welders – multielectrode	35483 06 4					
124		Seam welders	35483 07 2					
125		Other resistance welders (including flash, upset, and butt welders) – <i>Specify kind</i>	35483 08 0					
126		Resistance welder transformers (sold separately)	35483 09 8					
127		Resistance welder electrodes	35483 11 4	Thousand pounds				
128		Resistance welder components and accessories (including electrode holders, etc.) – <i>Specify kind</i>	35483 19 7					
129	Gas Welding and Cutting Equipment, Except Plasma (Including parts, attachments, and accessories) (35484)	Torches, including welding torches and gas air torches	35484 01 3	Number				
130		Cutting machines and carriages, stationary and portable	35484 02 1					
131		Other gas welding and cutting equipment (excluding pressure containers)	35484 03 9					
132		SPARE PARTS, ACCESSORIES, ATTACHMENTS, ADAPTORS ETC., N.E.C., SOLD SEPARATELY	35484 09 6	Number				
133	Tips	35484 04 7						
	Regulators, gas pressure	35484 05 4						
134	All other spare parts, accessories, and adaptors (sold separately)							
135	OTHER WELDING EQUIPMENT, COMPONENTS, AND ACCESSORIES (Excluding arc, resistance, and gas) (35485) (Report arc, resistance, and gas on lines 99-134)	Stud welding equipment	35485 01 0	Number				
136		Electric (including heated gas) and magnetic pulse welding machines and apparatus, n.e.c.; electric machines and apparatus for hot spraying of metals or sintered metal carbides	35485 13 5					
		137	Other welding equipment, n.e.c. (including friction)		35485 14 3			
138		Plasma welding and cutting equipment, fully or partly automatic	35485 15 0					
139		Plasma welding and cutting equipment, not fully or partly automatic	35485 16 8					
140		Soldering equipment (except hand and ultrasonic)	35485 07 7					
141	Components and accessories for all other welding equipment (excluding arc welders, resistance welders, and gas welding and cutting equipment)	35485 09 3						
142	PLASTICS-WORKING INJECTION MOLDING MACHINES	500 tons or less	35593 11 0					
143		More than 500 tons	35593 13 6					
144	Industrial molds and mold boxes – <i>Specify kind</i>		35442 00 3					
145	Receipts for machine shop job work and job order repair		35995 00 0					

CONTINUE WITH ITEM 18B ON PAGE 14

**Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued**

Line No.	Products and services  <b>(A)</b>		Census product code  <b>(B)</b>	Unit of measure for quantities  <b>(C)</b>	Products shipped and other receipts		
					Quantity  <b>(D)</b>	Value, f.o.b. plant <b>(E)</b>	
						584 Millions	Thou- sands
<b>146</b>	ALL OTHER PRODUCTS MADE IN THIS ESTABLISHMENT	<i>Describe and report separately each product with a sales value of \$50,000 or more which cannot be assigned to one of the lines above. Specify unit of measure for quantity.</i>					
			18			\$	
<b>147</b>			26				
<b>148</b>			34				
<b>149</b>		42					
<b>150</b>	CONTRACT WORK	Receipts for work done for others on their own materials . . . . . <i>Describe below products worked on and kind of work.</i>	93000 00 8				
<b>151</b>	MISCELLANEOUS RECEIPTS	Sales of scrap and refuse	99980 13 8				
<b>152</b>		Receipts for installation (or construction) of products of this establishment	99980 31 0				
<b>153</b>		Receipts for research and developmental work	99980 41 9				
<b>154</b>		Receipts for repair work	99980 61 7				
<b>155</b>		Other miscellaneous receipts	99980 98 9				
<b>156</b>	RESALES	Sales of products bought and sold without further manufacture, processing, or assembly in this establishment. (Include the sale of purchased machine tool subassemblies and knockdowns.) The cost of such items should be reported in item 10, line b.	99989 00 6				
<b>157</b>	<b>TOTAL value of shipments and other receipts</b> Sum of lines 1–156, column (E)		77000 00 8			\$	

**CONTINUE WITH ITEM 19 ON PAGE 15**

If not shown, please enter your 11-digit Census File Number from the address label on page 1

Census File Number

**Item 19. SELECTED PRODUCTS PRODUCED IN THIS ESTABLISHMENT AND USED IN MANUFACTURING OTHER PRODUCTS MADE IN THIS ESTABLISHMENT**

**INSTRUCTIONS**

- 1. Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.
- 2. Purchases or receipts of the items specified below should be reported only in item 17.
- 3. Materials used to produce the items specified below should be reported in item 17.
- 4. Quantities produced for sale as such and not for incorporation in other products should be reported in item 18B.
- 5. Report quantities in the unit of measure specified in column (D).

Line No.	Item  <b>(A)</b>	Census code		Was this operation performed at this establishment during 1997?		Unit of measure for quantities  <b>(D)</b>	Quantities produced in this establishment and used in manufacturing other products made in this establishment  <b>(E)</b>		
		591 <b>(B)</b>	592 <b>(C)</b>						
				Yes	No				
1	Ferrous foundries	1001 7		1 <input type="checkbox"/>	2 <input type="checkbox"/>	Short tons			
2	NONFERROUS FOUNDRIES (Except die-casting)	1002 5		1 <input type="checkbox"/>	2 <input type="checkbox"/>	↑ Thousand pounds ↓			
3				Aluminum	1003 3		1 <input type="checkbox"/>	2 <input type="checkbox"/>	
4				Copper	1004 1		1 <input type="checkbox"/>	2 <input type="checkbox"/>	
5				Zinc	1005 8		1 <input type="checkbox"/>	2 <input type="checkbox"/>	
6	Other	1006 6		1 <input type="checkbox"/>	2 <input type="checkbox"/>				
7	Precision turned products (on screw machines, turning centers, and CNC equipment)	1007 4		1 <input type="checkbox"/>	2 <input type="checkbox"/>				

**Items 20 and 21 – Not applicable to this report**

**REMARKS – Please use this space for any explanations that may be essential in understanding your reported data.**

**Item 22. CERTIFICATION – This report is substantially accurate and has been prepared in accordance with instructions.**

Name of person to contact regarding this report ( <i>Print or type</i> )		Telephone	Area code	Number	Extension	
667	1	2				
Name of company			Address ( <i>Number and street, city, State, ZIP Code</i> )			
Period covered	FROM: Month	Day	Year	TO: Month	Day	Year
	666	1		2		
Signature of authorized person			Title		Date	